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The publications listed below form a part of this section to the extent referenced:

ASTM INTERNATIONAL (ASTM)

- ASTM C 1029 (1996) Spray-Applied Rigid Cellular Polyurethane Thermal Insulation
- ASTM C 500 (1998; R 2002) Standard Test Methods for Asbestos-Cement Pipe

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

- 29 CFR 1910.28 (2002) Walking - Working Surfaces
- 29 CFR 1910.66 (2003) Powered Platforms, Manlifts, and Vehicle-Mounted Platforms

1.4 SYSTEM DESCRIPTION

Design safety anchor fall protection system to provide for safe execution of window washing or other suspended maintenance operations [including travel restraint].

Co-ordinate work of this Section with Section 07 52 00.00 40 MODIFIED BITUMINOUS MEMBRANE ROOFING to provide continuous waterproof protection.

Design anchors to resist without fracture a pull-out force of 24.03 kN/5400 lbs, applied in the most adverse direction.

Submit shop drawings to show roof layout indicating location and spacing of anchors, including dimensions, detail drawings of anchorage to structure, design details, and similar data. Drawings to bear stamp of Professional Engineer licensed in the State in which the project is located.

Submit manufacturer's catalog cut sheets for each product, including section or other type details.

1.5 SUBMITTALS

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project. Submittals should be kept to the minimum required for adequate quality

control. Include a columnar list of appropriate products and tests beneath each submittal description.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

Submittal items not designated with a "G" are considered as being for information only for Army projects and for Contractor Quality Control approval for Navy, Air Force, and NASA projects.

The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES, in sufficient detail to show full compliance with the specification:

SD-02 Shop Drawings

Shop Drawings to show roof layout indicating location and spacing of anchors, including dimensions, detail drawings of anchorage to structure, design details, and similar data. Drawings to bare stamp of Professional Engineer licensed in the State in which the project is located.

SD-03 Product Data

Manufacturer's catalog cut sheets for each product, including section or other type details.

Manufacturer's printed instructions.

SD-11 Closeout Submittals

Upon completion of project, provide Owner with Log Book for mandatory annual inspection.

Upon completion of project, provide Owner with roof plan showing layout of safety anchor system.

1.6 QUALITY ASSURANCE

Fall arrest roof anchors manufacturer to have minimum 5 years documented experience in the design and fabrication of fall protection systems.

Comply with all requirements of:

- A. [NBC (National Building Code of Canada)]
- B. [OBC (Ontario Building Code)]
- C. [ICBO (International Conference of Building Officials - Uniform Building Code)]
- D. [BOCA (Building Officials Code Administrators - National Building Code)]
- E. [SBBCI (Southern Building Code Congress International - Standard Building Code)]

1.7 SPECIAL WARRANTY

Warrant products installed under this section of work to be free of leaks, condensation and defects in materials and/or manufacture for a period of 20 years when installed in accordance with the manufacturer's written instructions.

PART 2 PRODUCTS

2.1 MANUFACTURER

Provide products as manufactured by Thaler Metal Industries, 1-800-387-7217 (Mississauga, Ontario, Canada) or 1-800-576-1200 (Niagara Falls, NY) or provide equal products by another manufacturer approved in advance by the [Architect], based upon:

1. 20 year warranty against leaks, condensation and defects in materials and/or manufacture, as applicable;
2. Ultimate load (structural rating) for up to 24.03 kN/5400 lbs strength for anchors equipped with forged round eye;
3. Structural integrity backed by \$5,000,000.00 liability insurance;
4. Injection molded urethane insulation in accordance to ASTM C 1029-90, as applicable;
5. Air barrier flashing design using EPDM seals only complying with CSA B272-93 flashing standard;
6. Maintenance free design;
7. Materials and size options and thicknesses;
8. Treated flashing deck flange, as applicable;
9. Written installation instructions.

2.2 MANUFACTURED UNITS

2.2.1 "Fixed Eye" Roof Anchors

2.2.1.1 Bolt-Through

Fall arrest roof anchors: Thaler [FARA-1 with galvanized forged 1018 steel eye] [FARA-11 with Type 304 stainless steel forged eye] [FARA-11U with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with: urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 6 mm/1/4 inch wall thickness x 114 mm 4-1/2 inch dia. x 305 mm/12 inch high welded to 16mm x 203mm x 203mm/5/8" x 8" x 8" 44W base plate; single 25 mm/1" Type 304 stainless steel bolt with EPDM weather

seal, top nut and washer, and Type 304 stainless steel 6mm x 102mm x 102mm 1/4" x 4" x 4" underdeck plate, lock washer and nut; SJ-34(9), 229mm high New-Standard STACK JACK flashing of [1.6mm.064" mill finish 1100-OT alloy aluminum] [0.53mm.021" 16 oz. copper] [0.46mm.018" Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.1.2 Bolt-Through (Non-standard Height)

Fall arrest roof anchors: Thaler [FARA-1NS with galvanized forged 1018 steel eye] [FARA-1NS with Type 304 stainless steel forged eye] [FARA-11UNS with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with: urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 14"355mm high and up welded to 3/4" x 8" x 8"19mm x 203mm x 203mm 44W base plate; single 1"25mm Type 304 stainless steel bolt with EPDM weather seal, top nut and washer, and Type 304 stainless steel 1/4" x 4" x 4"6mm x 102mm x 102mm underdeck plate, lock washer and nut; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-11SS with Type 304 stainless steel forged eye] [FARA-11UNS with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with: urethane insulated hollow stainless steel Type 304 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high and up welded to 5/8" x 8" x 8"16mm x 203mm x 203mm stainless steel Type 304 base plate; single 1"25mm Type 304 stainless steel bolt with EPDM weather seal, and Type SJ-34(9), 9"229mm Type 304 stainless steel 1/4" x 4" x 4"6mm x 102mm x 102mm underdeck plate, lock washer and nut; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.1.3 Adhesive Bolt

Fall arrest roof anchors: Thaler [FARA-2 with galvanized forged 1018 steel eye] [FARA-12 with Type 304 stainless steel forged eye] [FARA-12U with Type 304 stainless steel U bolt] roof anchor to 29 CFR 1910.28 and 29 CFR 1910.66 with: urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate prepared to receive four 5/8"16mm dia. adhesive anchor bolts (by others); SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021".053mm 16 oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchor: Thaler [FARA-12SS with Type 304 stainless steel forged eye] [FARA-12USS with Type 304 stainless steel U bolt] roof anchor to 29 CFR 1910.28 and 29 CFR 1910.66 with: urethane insulated hollow Type 304 stainless steel post 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 230mm x 203mm Type 304 stainless steel base plate prepared to receive four 5/8"16mm dia. adhesive anchor bolts (by others); SJ-34(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted

deck flange].

2.2.1.4 Bolt Around Beam

Fall arrest roof anchors: Thaler [FARA-3 with galvanized forged 1018 steel eye] [FARA-13 with Type 304 stainless steel forged eye] [FARA-13U with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28](#) and [29 CFR 1910.66](#) with: urethane insulated hollow hot dipped galvanized [ASTM C 500](#) steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate: four 5/8"16mm Type 304 stainless steel bolts and 5/8" x 8" x 8"16mm x 203mm x 203mm under-beam plate, lock washers and nuts; SH-37(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-13SS with Type 304 stainless steel forged eye] [FARA-13USS with stainless steel U bolt] roof anchor to [29 CFR 1910.28](#) and [29 CFR 1910.66](#) with; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate and Type 304 stainless steel 5/8" x 8" x 8"16mm x 203mm x 203mm underdeck plate, SJ-37(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.1.5 Weldable

Fall arrest roof anchors: Thaler [FARA-4 with galvanized forged 1018 steel eye] [FARA-14 with Type 304 stainless steel forged eye] [FARA-14U with Type 304 stainless steel U bolt] roof anchor to [[29 CFR 1910.28](#) and [29 CFR 1910.66](#)] with: urethane insulated hollow hot dipped galvanized [ASTM C 500](#) steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 5" x 5"16mm x 127mm x 127mm 44W base plate; SJ-37(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-14SS with Type 304 stainless steel forged eye] [FARA-14USS with stainless steel U bolt] roof anchor to [[29 CFR 1910.28](#) and [29 CFR 1910.66](#)] with; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 5" x 5"16mm x 127mm x 127mm Type 304 stainless steel base plate SJ-37(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.1.6 Cast-in-Place

Fall arrest roof anchors: Thaler [FARA-5 with forged 1018 steel eye] [FARA-15 with Type 304 stainless steel forged eye] [FARA-15U with Type 304 stainless steel U bolt] roof anchor to [[29 CFR 1910.28](#) and [29 CFR 1910.66](#)] with urethane insulated hollow hot dipped galvanized [ASTM C 500](#) steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"

305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate; single 1"25mm Type 304 stainless steel anchor bolt with EPDM weather seal, top nut and washer; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of .064"1.6mm mill finish 1100-OT alloy aluminum [.021"0.53mm 16 oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-5NS with galvanized forged 1018 steel eye] [FARA-15NS with Type 304 stainless steel forged eye] [FARA-15UNS with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"1.6mm wall thickness x 4-1/2"114mm dia. x 14"355mm high and up welded to 3/4" x 8" x 8"19mm x 203mm x 203mm 44W base plate; single 1"25mm Type 304 stainless steel anchor bolt with EPDM weather seal, top nut and washer; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16 oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal.

Fall arrest roof anchors: Thaler [FARA-15SS with Type 304 stainless steel forged eye] [FARA-15USS with stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with: urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate, single 1"25mm Type 304 stainless steel anchor bolt with EPDM weather seal, top nut and washer;; SJ-37(9), 9"229mm high New-Standard STACK JACK flashing of .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.1.7 Bolt Around OWSJ

Fall arrest roof anchors: Thaler [FARA-6 with galvanized forged 1018 steel eye] [FARA-16 with Type 304 stainless steel forged eye] [FARA-16U with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with: urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm under-joist plate and 1/4" x 4" x 4"6mm x 102mm x 102mm HSS crosstube assembly; four 5/8"16mm Type 304 stainless steel bolts with lock washers and nuts; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-6NS with galvanized forged 1018 steel eye] [FARA-16NS with Type 304 stainless steel forged eye] [FARA-16UNS with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with: urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 14"355mm high and up welded to 3/4" x 8" x 8"19mm x 203mm x 203mm 44W base plate; 3/4" x 8" x 8"19mm x 203mm x 203mm under-joist plate and 1/4" x 4" x 4"6mm x 102mm x 102mm HSS crosstube assembly; four 3/4"19mm Type 304 stainless steel bolt with lock washers and nuts; SJ-37(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-16SS with Type 304 stainless steel forged eye] [FARA-16USS with stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate SJ-37(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.1.8 Bolt Pre-cast Core Bolt

Fall arrest roof anchors: Thaler [FARA-7 with galvanized forged 1018 steel eye] [FARA-17 with Type 304 stainless steel forged eye] [FARA-17U with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with: urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 10" x 10"16mm x 254mm x 254mm 44W base plate; single 1"25mm Type 304 stainless steel bolt with EPDM weather seal, top nut and washer; galvanized 5/8" x 4" x 12"16mm x 102mm x 305mm core slab plate, lock washer and nut; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-17SS with Type 304 stainless steel forged eye] [FARA-17USS with stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 10" x 10"16mm x 254mm x 254mm Type 304 stainless steel base plate, single 1"25mm Type 304 stainless steel bolt with EPDM weather seal, top nut and washer; Type 304 stainless steel 5/8" x 4" x 12"16mm x 102mm x 305mm core slab plate; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.2 "Swivel Eye" Roof Anchors

2.2.2.1 Bolt Through

Fall arrest roof anchors: Thaler [FARA-31 with galvanized forged 1018 steel eye] [FARA-41 with Type 304 stainless steel forged eye] [FARA-41U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with: urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate; single 1"25mm Type 304 stainless steel bolt with: EPDM weather seal, top nut, washer, stainless steel cotter pin; Type 304 stainless steel 1/4" x 4" x 4"6mm x 102mm x 102mm underdeck plate, lock washer and nut; manufacturer's standard flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16 oz. copper] [.018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal] and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-41SS with Type 304 stainless steel

forged eye] [FARA-41USS with stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate, single 1"25mm Type 304 stainless steel bolt with: EPDM weather seal, top nut, washer, stainless steel cotter pin; Type 304 stainless steel 1/4" x 4" x 4"6mm x 102mm x 102mm underdeck plate, lock washer and nut; SJ-34(9), 9" 229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.2.2 Adhesive Bolt

Fall arrest roof anchors: Thaler [FARA-32 with galvanized forged 1018 steel eye] [FARA-42 with Type 304 stainless steel forged eye] [FARA-42U with Type 304 stainless steel U bolt] roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with: EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate prepared to receive four 5/8"16mm dia. adhesive anchor bolts (by others); single 1"25mm Type 304 stainless steel bolt with: EPDM weather seal, top nut, washer, stainless steel cotter pin; manufacturer's standard flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16 oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-42SS with Type 304 stainless steel forged eye] [FARA-42USS with stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate, single 1"25mm Type 304 stainless steel bolt with: EPDM weather seal, top nut, washer, stainless steel cotter pin; four stainless steel Type 304 5/8" 16mm dia. adhesive anchor bolts (by others); SJ-34(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.2.3 Bolt Around Beam

Fall arrest roof anchors: Thaler [FARA-33 with galvanized forged 1018 steel eye] [FARA-43 with Type 304 stainless steel forged eye] [FARA-43U with Type 304 stainless steel U bolt] roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with: 1"25mm Type 304 stainless steel bolt and EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate; four 5/8"16mm Type 304 stainless steel bolts, 5/8" x 8" x 8"16mm x 203mm x 203mm under beam plate, lock washers and nuts; manufacturer's standard flashing SJ-37 of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-43SS with Type 304 stainless steel forged eye] [FARA-43USS with stainless steel U bolt] roof anchor to [

29 CFR 1910.28 and 29 CFR 1910.66] with Type 304 stainless steel cap assembly, with 1"25mm Type 304 stainless steel bolt, EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate, four 5/8"16mm Type 304 stainless steel bolts, Type 304 stainless steel 5/8" x 8" x 8"16mm x 203mm x 203mm under beam plate, lock washers and nuts; SJ-37(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.2.4 Weldable

Fall arrest roof anchors: Thaler [FARA-34 with galvanized forged 1018 steel eye] [FARA-44 with Type 304 stainless steel forged eye] [FARA-44U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66]: with 1"25mm Type 304 stainless steel bolt, EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 5" x 5"16mm x 127mm x 127mm 44W base plate; manufacturer's standard flashing SJ-37 of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16 oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-44SS with Type 304 stainless steel forged eye] [FARA-44USS with stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with 1"25mm Type 304 stainless steel bolt, EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 5" x 5"16mm x 127mm x 127mm Type 304 stainless steel base plate SJ-39(9), 9" 229mm high New-Standard STACK JACK flashing 018"0.46mm type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.2.5 Cast-in-Place

Fall arrest roof anchors: Thaler [FARA-35 with galvanized forged 1018 steel eye] [FARA-45 with Type 304 stainless steel forged eye] [FARA-45U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with: EPDM weather seal, top nut washer, stainless steel cotter pin; urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate; single 1"25mm Type 304 stainless steel bolt with EPDM weather seal, top nut and washer; manufacturer's standard flashing SJ-34(9), 9"229mm high-Standard of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16 oz. copper] [.018" 0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-45SS with Type 304 stainless steel forged eye] [FARA-45USS with stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66]with: EPDM weather seal, top nut, washer, stainless steel

cotter pin; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate SJ-34(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

2.2.2.6 Bolt Around OWSJ

Fall arrest roof anchors: Thaler [FARA-36 with galvanized forged 1018 steel eye][FARA-46 with Type 304 stainless steel forged eye][FARA-46U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with: EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203 x 203mm 44W base plate; 5/8" x 8" x 8"16mm x 203mm x 203mm under-joist plate and 1/4" x 4" x 4"6mm x 102mm x 102mm (HSS) crosstube assembly; four 5/8"16mm Type 304 stainless steel bolts with lock washers and nuts; manufacturer's standard flashing SJ-37(9), 9"229mm high, of [.064"1.6mm mill finish 1100-OT alloy aluminum][.021"0.53mm 16 oz. copper][.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-46SS with Type 304 stainless steel forged eye][FARA-46USS with stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm under-joist plate and 1/4" x 4" x 4"6mm x 102mm x 102mm HSS cross tube assembly (by others); four 5/8"16mm Type 304 stainless steel bolts with lock washers and nuts; manufacturer's standard flashing SJ-37(9), 9"229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

2.2.2.7 Pre-Cast Core Bolt

Fall arrest roof anchors: Thaler [FARA-37 with galvanized forged 1018 steel eye][FARA-47 with Type 304 stainless steel forged eye][FARA-47U with Type 304 stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and 29 CFR 1910.66] with: EPDM weather seal, top nut, washer, stainless steel cotter pin; with urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 10" x 10"16mm x 254mm x 254mm 44W base plate; single 1"25mm Type 304 stainless steel bolt; galvanized 5/8" x 4" x 12"16mm x 102mm x 305mm core slab plate, lock washer and nut; manufacturer's standard flashing SJ-34(9), 9"229mm high, of [.064"1.6mm mill finish 1100-OT alloy aluminum][.021"0.53mm 16oz. copper][.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange][bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-47SS with Type 304 stainless steel forged eye][FARA-47USS with stainless steel U bolt] swivel eye roof anchor with Type 304 stainless steel cap assembly to [29 CFR 1910.28 and

29 CFR 1910.66] with: EPDM weather seal, top nut, washer, stainless steel cotter pin, with; urethane insulated hollow Type 304 stainless steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 10" x 10"16mm x 254mm x 254mm Type 304 stainless steel plate, single 1"25mm Type 304 stainless steel bolt, Type 304 stainless steel 5/8" x 4" x 12"16mm x 120mm x 305mm core slab plate, lock washer and nut, SJ-34(9), 9" 229mm high New-Standard STACK JACK flashing .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.3 Wall Anchors

2.2.3.1 Bolt Through

Fall arrest wall anchors: Thaler [FARA-81 with galvanized forged 1018 steel eye] [FARA-91 with Type 304 stainless steel forged eye] [FARA-91U with Type 304 stainless steel U bolt] wall anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with single 3/4"19mm dia. stainless steel bolt, lock washer, nut and 1/4" x 4" x 4"6mm x 102mm x 102mm with Type 304 stainless steel back up plate.

Fall arrest wall anchors: Thaler [FARA-82 with galvanized forged 1018 steel eye] [FARA-92 with Type 304 stainless steel forged eye] [FARA-92UA with Type 304 stainless steel U bolt] wall anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with single 3/4"19mm dia. cast-in-place stainless steel anchor bolt with lock washer and nut.

2.2.3.2 Adhesive Bolt

Fall arrest wall anchors: Thaler [FARA-83 with galvanized forged 1018 steel eye] [FARA-93 with Type 304 stainless steel forged eye] [FARA-93U with Type 304 stainless steel U bolt] wall anchor to [29 CFR 1910.28 and 29 CFR 1910.66] welded to [5/8" x 8" x 8"16mm x 203mm x 203mm 44W galvanized base plate] [5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate].

Fall arrest wall anchors: Thaler [FARA-93SS with Type 304 stainless steel forged eye] [FARA-93USS with Type 304 stainless steel U bolt eye] wall anchor to [29 CFR 1910.28 and 29 CFR 1910.66] welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate.

2.2.3.3 Cladding Bolt

Fall arrest wall anchors: Thaler [FARA-84 with galvanized forged 1018 steel eye] [FARA-94 with Type 304 stainless steel forged eye] [FARA-94U with Type 304 stainless steel U bolt] wall anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with single 3/4"19mm dia. stainless steel bolt and EPDM washer seal, ASTM C 500 HSS cladding spacer 1/4"6mm wall thickness x 4-1/2" 114mm, 1/4" x 4" x 4"6mm x 102mm x 102mm stainless steel back up plate, lock washer and nut.

Fall arrest wall anchors: Thaler [FARA-94SS with Type 304 stainless steel forged eye] [FARA-94USS with Type 304 stainless steel U bolt eye] wall anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with single 3/4"19mm dia. stainless steel bolt and EPDM washer seal, stainless steel cladding spacer 1/4"6mm wall thickness x 4-1/2"114mm, 1/4" x 4" x 4"6mm x 102mm x 102mm stainless steel back up plate, lock washer and nut.

2.2.3.4 Pier Bolt

Fall arrest wall anchors: Thaler [FARA-85 with galvanized forged 1018 steel eye] [FARA-95 with Type 304 stainless steel forged eye] [FARA-95U with Type 304 stainless steel U bolt] wall anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with single 3/4"19mm stainless steel pier bolt with EPDM washer, stainless steel 1/4" x 4" x 4"6mm x 102mm x 102mm stainless steel back plate; 1/4" x 4" x 4"6mm x 102mm x 102mm galvanized ASTM C 500 pier welded to a 5/8" x 8" x 8"16mm x 203mm x 203mm galvanized 44W base plate prepared to receive four 5/8"16mm anchor bolts (by others).

Fall arrest wall anchors: Thaler [FARA-95SS with Type 304 stainless steel forged eye] [FARA-95 with Type 304 stainless steel forged eye] [FARA-95USS with Type 304 stainless steel U bolt eye] wall anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with single 3/4"19mm stainless steel pier bolt and stainless steel with EPDM washer, 1/4" x 4" x 4"6mm x 102mm x 102mm Type 304 stainless steel back up plate; 1/4" x 4" x 4"6mm x 102mm x 102mm Type 304 stainless steel HSS pier welded to 5/8" x 8" x 8"16mm x 203mm x 203mm Type 304 stainless steel base plate prepared to receive four 5/8"16mm anchor bolts (by others).

2.2.4 "Swivel Eye" Terrace Anchors

2.2.4.1 Adhesive Bolt

Fall arrest terrace anchors: Thaler FARA-96 anchor with 1/4"6mm Type 304 stainless steel swivel plate eye to [29 CFR 1910.28 and 29 CFR 1910.66] with: hot dipped galvanized hollow ASTM C 500 steel low post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate prepared to receive four 5/8"16mm dia. adhesive anchor bolts (by others); two EPDM washer seals; 22 gauge. x 11-1/2" x 11-1/2" 0.76mm x 292mm x 292mm perforated Type 304 stainless steel enclosure box with solid 1/8" x 12" x 12"3mm x 305mm x 305mm stainless steel pan formed cover; 22 gauge x 17-1/2"0.76 x 445mm dia. stainless steel flashing disc.

Fall arrest terrace anchors: Thaler FARA-96SS anchor with 1/4"6mm Type 304 stainless steel swivel plate eye to [29 CFR 1910.28 and 29 CFR 1910.66] with: hot dipped galvanized hollow Type 304 stainless steel low post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate prepared to receive four 5/8"16mm dia. adhesive anchor bolts (by others); two EPDM washer seals; 22 gauge. x 11-1/2" x 11-1/2"0.76mm x 292mm x 292mm perforated Type 304 stainless steel enclosure box with solid 1/8" x 12" x 12"3mm x 305mm x 305mm stainless steel pan formed cover; 22 gauge x 17-1/2"0.76 x 445mm dia. stainless steel flashing disc.

2.2.4.2 Adhesive Bolt

Fall arrest roof anchors: Thaler [FARA-96A with galvanized forged 1018 steel eye] [FARA-106A with Type 304 stainless steel forged eye] [FARA-106AU with Type 304 stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with; EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow hot dipped galvanized ASTM C 500 steel post (HSS) 1/4"6mm wall thickness x 4-1/2"114mm dia. x 12"305mm high welded to 5/8" x 8" x 8"16mm x 203mm x 203mm 44W base plate prepared to receive four 5/8"16mm dia. adhesive anchor bolts (by others); 22 gauge0.76mm manufacturer's flashing Type 304 stainless steel; 22 gauge x 11-1/2" x 11-1/2"0.76mm x 292mm x 292mm perforated Type 304 stainless steel enclosure box with solid 1/8" x 12" x 12"3mm x 305mm x 305mm stainless steel pan

formed cover, and [PVC coated deck flange] [bituminous painted deck flange].

Fall arrest roof anchors: Thaler [FARA-106ASS with Type 304 stainless steel forged eye] [FARA-106AUSS with stainless steel U bolt] roof anchor to [29 CFR 1910.28 and 29 CFR 1910.66] with EPDM weather seal, top nut, washer, stainless steel cotter pin; urethane insulated hollow Type 304 stainless steel (HSS) 1/4" x 6mm wall thickness x 4-1/2" x 114mm dia. x 12" x 305mm high welded to 5/8" x 8" x 8" x 16mm x 203mm x 203mm Type 304 stainless steel base plate; 22 gauge 0.76mm stainless steel Type 304 flashing to CSA B272-93; 22 gauge x 11-1/2" x 11-1/2" x 0.76mm x 292mm x 292mm perforated Type 304 stainless steel enclosure box with solid 1/8" x 12" x 12" x 3mm x 305mm x 305mm stainless steel pan formed cover, and [PVC coated deck flange] [bituminous painted deck flange].

2.2.5 "Rope Stop" Anchors

Rope stop roof anchors: Thaler FARA-100 through bolt 3/4" x 19mm dia. Type 304 stainless steel rope stop anchor to [29 CFR 1910.28 and 29 CFR 1910.66] complete with 9" x 229mm x 229mm dia. x 18 gauge 1.2mm stainless steel flashing deck flange welded to rope stop, 2" x 51mm dia. stainless steel plug to suit roof condition and 1/4" x 4" x 4" x 6mm x 102mm x 102mm stainless steel back up plate, lock washer and nut.

2.2.6 Davit Arm and Base

Davit arms and bases: Thaler FARA-150 complete davit assembly to [29 CFR 1910.28 and 29 CFR 1910.66], with urethane filled, hot dipped galvanized ASTM C 500 base 9" dia. x 1/4" x 229mm x 6mm welded to 3/4" x 14" x 14" x 19mm x 356mm x 356mm under-deck plate using four 3/4" x 19mm dia. stainless steel bolts; davit arm holder 1/2" x 8-7/8" I.D. x 12mm x 225mm galvanized ASTM C 500 with weep holes, connected to steel hinge using two 3/4" x 19mm stainless steel hinge pins tethered with 1/8" x 3mm stainless steel cable; mast upright 5/16" x 8-5/8" O.D. x 8mm x 220mm 6061-T6 extruded aluminum with handle grips; horizontal 6061-T6 aluminum I beam 1/4" x 3-1/2" x 6" x 6mm x 89mm x 152mm with 3/8" x 10mm thick sliding stainless steel suspension line attachment plate and handle grips; Type 304 retractable stainless steel head with leveling devices; strut reinforcing 1/4" x 3" x 3" x 6mm x 76mm x 76mm with 1/4" x 6mm connector plates: SJ-34(9), 9" x 229mm high New-Standard STACK JACK flashing of [.064" x 1.6mm mill finish 1100-OT alloy aluminum] [.021" x 0.53mm 16 oz. copper] [.018" x 0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.7 Swivel Outrigger Arm and Base

Outrigger arm and base: Thaler FARA-170 complete outrigger assembly to [29 CFR 1910.28 and 29 CFR 1910.66], with urethane filled, hot dipped galvanized ASTM C 500 base 4-1/2" dia. x 1/4" x 114mm x 6mm welded to 5/8" x 8" x 8" x 16mm x 203mm x 203mm ASTM C 500 base plate and bolted through roof deck to 1/4" x 4" x 4" x 6mm x 102mm x 102mm back-up plate using a single 1" x 25mm dia. stainless steel bolt; arm holder 5-1/2" x 7-1/2" x 1/4" x 140mm x 191mm x 6mm Type 304 stainless steel, with 1" x 25mm dia. stainless steel tethered with 1/8" x 3mm stainless steel cable; outrigger arm 5" x 7" x 1/4" x 127mm x 178mm x 6mm hollow 6063-T6 aluminum or galvanized steel; with handle grip and stainless steel U bolt suspension line attachment plate; SJ-34(9), 9" x 229mm high New-Standard STACK JACK flashing of [.064" x 1.6mm mill finish 1100-OT alloy aluminum] [.021" x 0.53mm 16 oz. copper] [.018" x 0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.8 "Rope Drop" Anchors

Rope drop roof anchors: Thaler FARA-180 adhesive bolt galvanized rope drop anchor to [29 CFR 1910.28 and 29 CFR 1910.66], with: 4-1/2"114mm dia. hollow ASTM C 500 steel sleeve section (HSS) 1/4"6mm wall thickness, length to suit application, welded to 5/8"16mm dia. adhesive anchor bolts (by others); removable cap w/set screw tethered to 1/8"3mm stainless steel cable; 1"25mm stainless steel cross bar; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm16 oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

Rope drop roof anchor: Thaler FARA-180SS adhesive bolt Type 304 stainless steel rope drop anchor to [29 CFR 1910.28 and 29 CFR 1910.66], with: 4-1/2" 114mm dia. hollow stainless steel sleeve section (HSS) 1/4"6mm wall thickness, length to suit application, welded to 1/2" x 10" x 10"12mm x 254mm x 254mm stainless steel base plate prepared to receive four 5/8"16mm dia. adhesive anchor bolts (by others); removable cap w/set screw tethered to 1/8"3mm stainless steel cable; 1"25mm stainless steel cross bar; SJ-34(9), 9"229mm high New-Standard STACK JACK flashing of .018"0.46mm Type 304 stainless steel to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

2.2.9 Travel Restraint Roof Anchors

Travel restraint roof anchor: Thaler [FARA-710] [FARA-720] anchors including appropriate mounting hardware for fastening to structural roof deck; to [29 CFR 1910.28 and 29 CFR 1910.66] with, galvanized forged 1018 steel eye; urethane insulated, hollow, hot dipped galvanized ASTM C 500 steel post section (HSS) 1/4"6mm wall thickness x 2-3/8"60mm dia., x [18"457mm] [36" 915mm] high welded to 44W base plate; [SJ-37, 7"178mm high] [SJ-38, 13"330mm high] [SJ-39, 19"483mm high] New-Standard STACK JACK flashing of [.064"1.6mm mill finish 1100-OT alloy aluminum] [.021"0.53mm 16 oz. copper] [.018"0.46mm Type 304 stainless steel] to CSA B272-93, with EPDM Triple Pressure Grommet Seal and EPDM Base Seal and [PVC coated deck flange] [bituminous painted deck flange].

PART 3 EXECUTION

3.1 EXAMINATION

Report to the Contractor, in writing, defects of work prepared by other trades and other unsatisfactory site conditions. Verify site dimensions. Commencement of work will imply acceptance of prepared work.

Note: Review design criteria for tapered roof insulation systems if necessary for specific projects.

For roofs employing tapered insulation systems, height adjustments may be necessary i.e. ensure anchor eye is minimum 9"229mm above roof surface.

3.2 PREPARATION

Note: The following clauses apply to re-roofing or retrofit installations only.

For re-roofing or retrofit work, remove existing roof assembly as necessary to allow for installation of roof anchors.

In the event of structural deficiencies, deck corrosion or deterioration, ensure that a structural engineer has assessed and approved all surfaces upon which the work of this Section depends. Institute repairs and/or reinforcement where necessary.

If necessary, protect building interior and contents against ingress of water, dust, debris or other material.

3.3 INSTALLATION

3.3.1 [Roof Anchors] [Davits] [Outriggers]

Install anchors or equipment in accordance with [manufacturer's printed instructions](#), shop drawings and as specified.

Ensure anchors or equipment is installed under the direct supervision of a Professional Engineer [and Roofing Consultant].

Where necessary, provide protection against deterioration due to contact of dissimilar materials.

Where bolting is used for fastening anchors, no fewer than two threads is to be exposed and the nut is to be positively locked by deforming threads, welding, pinning or equivalent method.

Ensure work is inspected prior to application of roofing.

3.3.2 Flashing

Install roof support flashing in accordance with manufacturer's printed instructions.

3.3.2.1 Bur

Set flashing deck flange in layer of plastic cement and flash in with 3 overlapping layers of felt flashing.

3.3.2.2 Modified Bitumen

Torch membrane until bitumen is fluid and set flashing deck flange into fluid. Flash in flange with two overlapping layers of ModBit and seal with asphalt sealer. Do not overheat (melt) EPDM Base Seal.

3.3.2.3 Single Ply

Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to STACK JACK Flashing.

Note: For PVC membrane, specify PVC coated flashing; weld roofing to deck flange using PVC torch.

3.3.2.4 PVC Single Ply

Set deck flange in layer of membrane adhesive and extend single ply up sleeve to highest elevation possible and clamp membrane to flashing. Weld

roofing to deck flange using PVC torch.

3.3.3 Retrofit Work

Remove sufficient area of roofing down to deck level to facilitate anchor installation.

Where possible and as directed by Roofing Consultant, reuse any salvageable materials and restore system to match original.

Structural adequacy of a parapet or other part of the building on which the support system is placed shall be verified by a professional engineer before rigging.

3.4 FIELD QUALITY CONTROL

Comply with the requirements of Section [01 45 00.00 40 Quality Control].

All anchor work to be inspected by a qualified testing agency, Professional Engineer [and Roof Consultant] upon completion of work.

Note: Field testing of roof and wall anchor products is not required. Only the field testing of adhesive fasteners is required. In rare instances where adhesive fasteners must be tested after roof anchors have been roofed in, consult a Professional Engineer for calculation of the load requirement prior to testing.

3.5 ADJUSTING AND FINAL INSPECTION

Verify that all manufactured units have been installed in accordance with specifications and details, and will function as intended. Adjust any items where necessary to ensure proper operation.

Provide necessary documentation certifying system is acceptable for service (Engineer's Certificate of Acceptance).

Upon completion of project, provide Owner with [Log Book](#) for mandatory annual inspection.

Upon completion of project, provide Owner with [roof plan showing layout of safety anchor system](#).

3.6 CLEANING

Clean manufactured units using materials and methods approved by manufacturer. Do not use cleaners or techniques which could impair performance of the roofing system.

-- End of Section --